

The opinion in support of the decision being entered today  
was **not** written for publication and  
is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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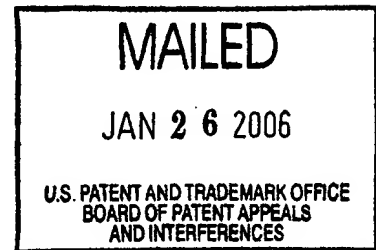
**Ex parte** XIAO-DONG LI, PATRICK LIE CHIN CHEONG,  
ASHRAF S. MAHMOUD and MAZDA SALMANLAN

Appeal No. 2005-1885  
Application No. 09/708,782

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ON BRIEF

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Before THOMAS, DIXON, and NAPPI, **Administrative Patent Judges.**

NAPPI, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134 of the final rejection of  
claims 1 through 46. For the reasons stated *infra* we will not sustain the  
examiner's rejection of claims 1 through 46.

## THE INVENTION

The invention relates to a method of managing resources in a Radio Access Network (RAN). Data from a Packet Data Serving Node (PDSN) presents data, along with a Service Quality Level (SQL) to the RAN base station to be forwarded to a mobile station. The RAN base station attempts to allocate RAN resources to meet the SQL. See page 7 of appellants' specification. If the base station is only able to partially allocate the resources to meet the SQL, the partial allocation of resources are mapped to a new packet SQL and relayed to the PDSN. The PDSN remarks the packet and forwards it to the mobile user. See page 8 of appellants' specification. When a packet is transmitted from the mobile unit to the PDSN, the packet contains a SQL. The base station of the RAN maps the RAN resources to meet the packet's SQL. If the RAN does not meet the packet's SQL, the base station remarks the data packet with a new SQL that corresponds to the RAN SQL. See page 9 of appellants' specification.

Claim 1 is representative of the invention and is reproduced below:

1. A method for managing Radio Access Network (RAN) resources to service forward link packet data transmissions, the method comprising:
  - receiving a data packet from a packet data network, the data packet directed toward a Mobile Station (MS) serviced by the RAN and including a packet service quality level indicator;
  - mapping the packet service quality level indicator to a corresponding set of RAN resources;
  - attempting to allocate the corresponding set of RAN resources to service the transmission of the data packet to the MS;
  - upon a partial allocation of the corresponding set of RAN resources, responding to the packet data network indicating the partial allocation;

upon a full allocation of the corresponding set of RAN resources, responding to the packet data network indicating full allocation; and upon at least a partial allocation of the corresponding set of RAN resources, forwarding the data packet to the MS .

### **THE REFERENCES**

The references relied upon by the examiner are:

Garner	6,542,739	April 1, 2003 (filed October 6, 2000)
Willars	6,507,567	January 14, 2003 (filed April 9, 1999)
Einola et al. (Einola)	6,438,370	August 20, 2002 (filed March 17, 1999)

### **THE REJECTIONS AT ISSUE**

Claims 1 through 29 and 42 through 44 stand rejected under 35 U.S.C. § 103(a) as being obvious over Willars in view of Garner. Claims 30 through 41, 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being obvious over Willars in view of Garner and Einola. Throughout the opinion we make reference to the briefs and the answer for the respective details thereof.

### **OPINION**

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, appellants' arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

With full consideration being given to the subject matter on appeal, the examiner's rejections and the arguments of appellants and the examiner, for the reasons stated *infra* we will not sustain the examiner's rejections of claims 1 through 46 under 35 U.S.C. § 103(a).

**Rejection of claims 1 through 8, 14 through 19, 30 through 41, 45 and 46.**

On pages 11 through 14 of the brief, appellants argue that the combination of Willars and Garner do not teach the limitations of claims 1, 14 and 42. Specifically, appellants argue, on page 12 of the brief:

The Final Office Action attempts to equivalence Garner's allocation of satellite communication system resources by the AMS(R)S system with the limitation of independent claim 1 of the allocation of RAN resources to service a packet of data communication. This equivalencing is incorrect. With Garner, one system (the AMS(R)S system) takes over the operation of the allocated resources of another system (the satellite communication system). In the case of independent claim 1, RAN resources are allocated only to service a packet data transmission. The packet data network simply passes the packet data to the RAN. It does not take over control of the RAN.

In response the examiner asserts, on page 11 of the answer:

[T]he examiner disagrees because the primary reference Willars and the secondary reference Garner are analogous art i.e. channel allocation environment. Though the frequency band of the satellite communications and cellular communications are different, they are both however wireless communications technologies, the frequency bands of which are assigned and regulated by the FCC. In this particular invention, the secondary reference Garner is relied upon for the particular teaching of indicating to the network the type of resources allocated whether it is a partial or full allocation. This teaching is combined with Willars in order to give more information to the user who has requested the resources from the network.

Appellants clarify their argument on pages 13 and 14 of the reply brief, appellants argue:

With Garner, the AMS(R)S Network Operations Controller (NOC) requests an **allocation of satellite system resources for general use** via interconnection with the NOC of the satellite system. Independent claim 1 is directed to the allocation of RAN resources to service the **transmission of a data packet to the mobile station**. According to independent claim 1, RAN resources are fully allocated, partially allocated, or not allocated only to service **the transmission of the data packet**. Garner discloses the allocation of satellite system resources for **general use**. These teachings of Garner cannot be properly equivalenced with the **allocation of RAN resources to service the transmission of a data packet to a mobile station, the partial allocation of resources to service the transmission of the data packet**, and the **reporting of such partial allocation** as required by independent claim 1. Thus, Garner fails to meet the shortcomings of Willars and independent claim 1 is not unpatentable over Willars in view of Garner.

We disagree with the examiner's rationale. Claim 1 includes the limitations "attempting to allocate the corresponding set of RAN resources to service the transmission of the data packet to the MS" and "upon a partial allocation of the corresponding set of RAN resources, responding to the packet data network indicating the partial allocation." Thus, the claimed allocation and partial allocation of resources are for individual packets. On page 4 of the answer, the examiner asserts that Garner in column 78, lines 52 through 56 teaches partial allocation of resources. However, we find, as appellants argue in the reply brief, the partial allocation of resources in Garner is for general use and not for an individual packet of data. Thus, we do not find that Garner teaches the claimed step of "upon a partial allocation of the corresponding set of RAN

resources, responding to the packet data network indicating the partial allocation.” The examiner has not asserted, nor do we find that Willars teaches this limitation. Accordingly, we will not sustain the examiner’s rejection of claim 1 and the claims dependent thereupon, claims 2 through 8.

On page 14 of the reply brief, appellants assert that independent claims 14 and 42 are allowable for similar reasons. On pages 15 and 16 of the reply brief, appellants argue that independent claims 30, 36, 45 and 46 are allowable of similar reasons.

We concur with appellants. Each of independent claims 14, 30, 36, 42, 45 and 46 contain similar limitation directed to responding to the packet data network indicating the partial allocation. With respect to claims 30 through 41, 45 and 46, which are rejected, using the combined teachings of Willars, Garner and Einola, the examiner has not asserted, nor do we find that Einola teaches the limitation of responding to the packet data network indicating the partial allocation. Accordingly, we reverse the examiner’s rejection of claims 14 through 19, 30 through 42, 45 and 46 for the reasons stated *supra* with respect to claim 1.

### **Rejection of claims 9 through 13**

Appellants argue on page 15 of the brief that claim 9 is directed to the RAN receiving data from the mobile station and includes a limitation directed to remarking the data packet when the packet service quality indicator does not correspond to the RAN. Appellants argue, that contrary to the examiner's

assertion "Willars fails to disclose, suggest or even address remarking of data packets from a mobile station as required by claim independent 9."

On pages 11 and 12 of the answer, the examiner responds:

The examiner disagrees and draws attention to the Willars reference where the user is requesting to transmit data is initially assigned a radio bearer thus mapping the resource allocation to service quality indicator and at a future time when the user initiates a speech call, then an additional resources are allocated, thus remarking the new packet with the corresponding RAN service quality level indicator. See col. 3, lines 17-60, col. 9, line 61 - col. 10, line 49.

We disagree with the examiner. Claim 9 includes the limitations "receiving a data packet from a Mobile Station (MS) serviced by the RAN, the data packet intended for a coupled packet data network and including a packet service quality level indicator" and "when the packet service quality level indicator does not correspond to the RAN service quality indicator, remarking the data packet with a new packet service quality level indicator corresponding to the RAN service quality level indicator." We do not find that the section of Willars, which the examiner relies upon, teaches this limitation. Willars teaches in column 2, lines 57 through 59 that each bearer has an associated quality of service. Willars discusses a scenario where the mobile unit initiates a speech call, in column 3, lines 17 through 60. The examiner relies upon this scenario to teach that the service quality level indicator is remarked. However, we do not concur with this finding, Willars teaches that an additional bearer is established for the speech call. See column 3, lines 45 and 46. Thus, we do not find that Willars teaches remarking the service quality of the data packet when the

speech call is made. Rather, a new separate bearer with a new quality of service is created for the speech call in addition to the data bearer. As such, we do not find that Willars teaches the limitation of remarking the data packet with a new packet service quality level indicator as claimed in claim 9 and we will not sustain the examiner's rejection of claims 9 through 13.

**Rejection of claims 20 through 29, 43 and 44.**

Appellants argue on page 16 of the brief that independent claim 20 includes limitations directed to receiving a data packet from a mobile station, and when the packet service quality does not correspond to the RAN service quality, indicating to the packet data servicing node a new service quality level indicator corresponding to the RAN service quality level indicator. Appellants argue, that Willars and Garner fail to teach these features. Further, appellants argue that independent claims 25, 43, and 44 contain similar limitations.

The examiner provides no response other than as indicated above with respect to claim 9.

We concur with appellants. Claim 20 includes the limitations, "the BSC [Base Station Controller] to receive a data packet from a Mobile Station (MS) serviced by the RAN, the data packet intended for the PDSN [Packet Data Service Node] and including a packet service quality level indicator" and "when the packet service quality level indicator does not correspond to the RAN service quality level indicator, indicate to the PDSN a new packet service quality level



indicator corresponding to the RAN service quality level indicator.” Thus, claim 20 includes limitations directed to a base station indicating a new service quality level indicator to the PDSN if the RAN resources are not the same as required by the data packet’s service quality level indicator. Claims 25, 43 and 44 contain similar limitations. As stated *supra* with respect to claim 9, we do not find that Willars teaches the limitation of remarking the data packet with a new packet service quality indicator. Accordingly, we will not sustain the examiner’s rejection of claims 20 through 29, 43 and 44.



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